CITY OF POST FALLS

Public Services Department
Office of the Director

April 30, 2010

Mr. Brian Nickel
US EPA, Region 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

RE: CITY OF POST FALLS' ANTICIPATED NPDES COMPLIANCE SCHEDULE

Dear Mr. Nickel:

Thank you for this opportunity to provide input regarding the compliance schedule that will be associated with EPA's reissuance of the City of Post Falls ("Post Falls" or the "City") 1999 National Pollutant Discharge Elimination System (NPDES) permit. As you know, there is some uncertainty about the final requirements associated with the Spokane River TMDL. The information in this letter is based on the assumption that Post Falls NPDES permit will have technologically achievable discharge limitations for phosphorus equivalent to 50 µg/L on a seasonal average and that trading and/or offsets will not be required. We also assume that the NPDES permit will not include ammonia or CBOD limits that will require Post Falls to install substantial treatment technology in addition to what will be needed for phosphorus. If these assumptions do not hold true, Post Falls' compliance schedule needs may change.

Post Falls already has significant treatment upgrades in process. Although our 2007 draft permit was withdrawn in September of 2008 to allow the Washington Department of Ecology (WDOE) to revise its Spokane River/Lake Spokane Dissolved Oxygen Total Maximum Daily Load (TMDL), the City proceeded with the capacity upgrades to our Water Reclamation Facility in anticipation of the 10-15 year needs for both Post Falls and Rathdrum. Those upgrades include added biological nutrient removal processes to reduce both total nitrogen and total phosphorus. Ultraviolet disinfection upgrades will continue to keep chlorine out of our final product water and aerobic biosolids will be reclaimed through composting by a third party for eventual soil amendment and landscaping purposes. The improvements are costing the City over $11 million and are on track for start-up in late 2010. Optimization of the processes will likely extend through most of 2011. In addition, our Industrial Pretreatment Program is in its final phases of sampling for an anticipated submittal to EPA late this year.

Post Falls has also stayed closely involved in the TMDL process hoping to obtain waste load allocations (WLAs) and resulting NPDES permits issued by EPA that can be realistically achieved. The attached compliance schedule chart shows how the City

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intends to work within its technical, regulatory, financial, construction, and operational constraints to achieve compliance with the future regulations nine years after final permit issuance. This is a significant commitment given the dramatic changes that the 2010 TMDL outlines compared to the 2007 draft permits. While we have substantive disagreements with the final load allocations proposed in the TMDL and some of the specific methodologies utilized to derive anticipated future permit limits necessary to support the TMDL, we recognize and fully support providing tertiary treatment with aggressive but achievable reductions in oxygen demanding substances for the benefit of the Spokane River system.

Critics have suggested that permit holders along the Spokane River should have continued with all elements of the 2007 draft permit conditions, even after they were withdrawn. That would have proven to be inappropriate for Post Falls. For example, Post Falls was a primary proponent for the Rathdrum Prairie Wastewater Master Plan (RPWMP) which was completed in late 2008. We had no real choice but to utilize the 2007 draft permits as the best available regulatory basis for planning our service area build-out between the cities of Rathdrum, Post Falls, and Hayden. When WDOE issued the final TMDL in February 2010, it dramatically devalued the water reuse program envisioned by the RPWMP under the 2007 permit conditions. The stringent 2010 WLAs now extend four months longer than in 2007, three months beyond our region's growing season, and seasonal averaging is not included in the TMDL. Combining these restrictions with the non-degradation standard applied over the Rathdrum Prairie Special Resource Aquifer in Idaho (no irrigation beyond the growing season), Post Falls and others effectively are forced to use end-of-pipe technology to meet effluent limits for the foreseeable future. Reuse no longer makes sense if Post Falls has to install tertiary treatment to meet phosphorus limits outside of the growing season. It will be far cheaper for Post Falls to continue to operate the tertiary treatment equipment through the growing season as compared to incurring the land and storage costs for re-use on top of treatment costs when the only benefit is diverting a small portion of our oxygen-demanding constituents during summer months. Reuse now only makes sense after the limits of treatment technology have been reached. In fact, reuse may never be feasible given the enormous storage requirements during the shoulder months and huge land requirements to discharge eight months of effluent during the growing season. This is partly why Post Falls is concerned that the TMDL requirements amount to a de facto growth limit.

We continue to work with the Idaho Department of Environmental Quality (IDEQ) to find the most appropriate ways to provide wastewater treatment, to implement reuse and to protect our aquifer. However, it is not realistic to count on irrigation and industrial reuse to be the primary recipient of our reclaimed water from March 1st through October 31st every year. We also continue to work with WDOE, EPA, the Spokane Tribe, and other permit holders to more accurately determine the bio-availability of various forms of phosphorus in the Spokane River system. The initial phase of that study should be complete in late 2010 and will help regulators and decision-makers more accurately define the constituents that adversely affect the Spokane River system.

Those familiar with municipal (public) systems recognize that each entity has its own unique situations and local constraints to meet compliance. Those challenges include financing through public-approved bond elections, local regulatory approval, and maintaining full-time on-going operations, to name just a few. Post Falls is committed to protecting the water quality in the Spokane River; however, enforcing the most stringent phosphorus limits in the nation in one permit cycle would place an impossible requirement on Post Falls. Therefore, the **attached schedule** outlines achievable steps through two permit cycles with the important activities described below.

Year 1: During the first year (assumed to be split between 2010 and 2011), the City would prepare the sampling Quality Assurance Project Plan (QAPP) and begin the sampling required for the new surface water and WRF monitoring. Additionally, we would update the 2008 WRF Master Plan into the more comprehensive Facility Plan needed to address expected growth rates, changes in permit conditions, and the financial analysis to support rate increases and/or a bond election to fund the improvements. The specific approaches to finance, procure, construct, and perform pilot plant analyses of the most promising phosphorus removal technologies would be prepared and submitted concurrently to the completion of the Facility Plan. Phosphorus removal will likely utilize various combinations of chemical addition, mixing, flocculation, settling and filtration. While the pilot work will have similarities to the current efforts underway in Spokane and Coeur d'Alene, Post Falls utilizes biological phosphorus removal and oxidation ditch technology which will dramatically change the character of water that will feed the pilot units. Similar to the 2007 permit conditions, Post Falls would provide periodic progress report to EPA and IDEQ (e.g. every other year or whatever intervals you would prefer) to indicate specific elements completed, elements planned for the upcoming year and satisfactory compliance with this schedule.

Year 2: Once the Facility Plan and Pilot Plant approach are accepted by IDEQ and EPA, the City will conduct public hearings for rate and fee increases to fund the pilot plant work as well as re-apply for State Revolving Fund loans. Simultaneously, design would proceed on the pilot plant so that it could begin construction early the following year. With rate and fee increases approved, the pilot work would move to the bidding and construction phases at the end of second year. At the same time that pilot scale chemical feed, mixing, settling, and filtration systems are entering design, the City would evaluate and design interim full scale chemical feed to enhance phosphorus removal pending the future full scale facilities included with filtration.

Year 3: The third year of the compliance schedule would see completed construction of the pilot filtration facilities as well as the interim full-scale chemical feed facilities. Operations of the pilot and full-scale installation and test would begin by mid-year three with data gathering competed early in the fourth year. Year three would also begin interim enhanced phosphorus removal with chemical addition to the BNR effluent ahead of the secondary clarifiers. Interim chemical addition would also provide an opportunity to measure the impact of added precipitation on the solids processes within the entire facility. It would also add data to the on-going

bioavailability study performed by the University of Washington and sponsored by the Spokane River Stewardship Partners and WDOE.

Year 4: Year four would complete the data gathering and analyses for the various combinations of pilot-scale tertiary treatment options (chemical types, mixing, enhanced settling, and filtration). The data will be compiled and submitted in report form to IDEQ and EPA. The report will include information on impacts to the biosolids processing and disposal as well as the bioavailability of various phosphorus species, effectiveness in meeting WLAs, costs of the treatment options and effects of chemical addition on the existing ultraviolet light disinfection system.

Year 5: Once the treatment approach based on the information gathered and submitted in Year 4 provides an approved direction, Post Falls would update its Facility Plan with any changes in technology, performance or costs that have been determined during the first four years of effort. We would also conduct public outreach to gain ratepayer support for bond funding approval through an election or judicial confirmation that must occur in Year 5. Simultaneously, design of the improvements would proceed to be ready for bidding and construction as early as possible in the next permit cycle. The application for the next NPDES permit must be submitted no later than half way through Year 5 so earlier timeline elements must be completed and approved to move forward. Interim chemical addition would continue with gathering of bioavailability and biosolids production data, as necessary, until the tertiary treatment plant improvements are completed.

Year 6: Year 6 would see design completion and approval, plus project bidding, award and ground-breaking on the tertiary treatment plant improvements, assuming that the bond funding efforts were successful in Year 5. If bond funding is not approved in Year 5, the City would have to attempt another public outreach effort and/or seek an emergency declaration and judicial ruling on the "ordinary and necessary" nature of the proposed expenditures. Interim chemical addition would continue with gathering of bioavailability and biosolids production data, as necessary.

Year 7: Construction activities and continued bioavailability and biosolids production data would dominate all activities in the seventh year of the permit compliance period.

Year 8: The eighth year of the permit cycle would see completion and start-up of the tertiary treatment plant improvements necessary to meet the WLAs. Additional work would begin to optimize the processes late in Year 8 in preparation of full-scale demonstration of process performance in Year 9.

Year 9: This is the final year to prepare and prove out all processes to meet the final permit WLAs. Year 9 is also the only year with any schedule flexibility to account for unforeseen obstacles from earlier activities such as securing adequate and timely financing. Too many previous activities rely on sequentially completing multiple tasks to expect complete permit compliance in Year 9. Year 9 would see termination of interim chemical addition in lieu of operating full tertiary treatment with more moderate chemical inputs. Filter rates, cleaning cycles, side-stream impacts,

biosolids production, and bioavailability data would be evaluated and submitted to EPA and IDEQ for validation of the process suitability at the end of Year 9. This would be the final annual report indicating compliance with this schedule.

Year 10: This would be the first full year of compliance under the NPDES Compliance Schedule. It will also be the year that Post Falls reapplies for its NPDES permit and actively participates with WDOE and the Spokane River Stewardship Partners to reevaluate the TMDL and water quality improvements in the River and Lake Spokane. Additionally, Post Falls and Rathdrum will have to reevaluate their growth projections and determine the steps necessary to provide capacity for their citizens. Technological advances may provide some flexibility in meeting WLAs in the Spokane River. Reuse projects protecting the Special Resource Aquifer may be more readily accepted and documented. Bioavailability of phosphorus after these aggressive tertiary treatment efforts may prove to be very low and more protective of the receiving water than previously understood. Additional constituents may also be regulated that would create new levels of monitoring and treatment efforts (i.e. PCB's, PBDE's, PPCP's and so on).

Based on this detailed schedule, Post Falls would support the following compliance schedules, interim limits and milestones in the NPDES permit:

1. A 10-year schedule of compliance for phosphorus
2. Interim requirements for schedule of compliance
    a. By one (1) year after the effective date of the final permit, the permittee must provide a Facilities Plan to EPA and IDEQ outlining the studies and schedule required to achieve final effluent limitations. This schedule must include a timeline for full scale pilot testing.
    b. By four (4) years after the effective date of the final permit, the permittee must provide written notice that pilot studies of phosphorus removal technologies have been completed, and submit to EPA and IDEQ a report of the results.
    c. By the expiration date of the final permit, the permittee must provide to EPA and IDEQ a revised Facilities Plan including a plan for implementation.
    d. By six (6) years after the effective date of the final permit, the permittee must provide written notice to EPA and IDEQ that design has been completed and bids have been awarded to build the facilities necessary to comply with the final effluent limitations. Provided, however, that this requirement and the requirement in paragraphs e. and f. shall be extended by (1) one year if the permittee has exercised best efforts but has been unable to obtain financing within six (6) years.
    e. By eight (8) years after the effective date of the final permit, the permittee must provide written notice to EPA and IDEQ that construction has been completed on the facilities necessary to comply with the final effluent limits for phosphorus.
    f. By nine (9) years after the effective date of the final permit, the permittee must have completed startup evaluation and optimization of phosphorus and comply with final effluent limits.

g. By the 3rd, 4th and 5th years after the effective date of the final permit, the permittee must submit to EPA and IDEQ reports of progress, which outline the progress toward achieving compliance with the total phosphorus effluent limitations. At a minimum, the reports must include:
    i. An assessment of the previous year of effluent data and comparison to the effluent limitations.
    ii. A report on progress made towards meeting the effluent limitations.
    iii. A report on progress made toward completing remaining interim requirements of this compliance schedule.
    iv. Further actions and milestones targeted for the upcoming year.
h. While the schedule of compliance specified in Part I.C.2 are in effect, the permittee must comply with the following interim effluent limitations and monitoring requirements:

Post Falls recognizes the need to move forward to protect the Spokane River, Lake Spokane and our Rathdrum Prairie Aquifer and is prepared to take those steps. These efforts will not be easy, nor will they be inexpensive. We must take the steps in a thoughtful and proactive manner that fully engages the public with their costs and their benefits. We believe that we have laid out a compliance schedule that will accomplish these goals in a responsive and responsible manner. I look forward to your comments and working with EPA and IDEQ to achieve our mutual objectives for the public's benefit.

Sincerely,
City of Post Falls

Terry Werner, Public Services Director

Enclosure: City of PF Proposed Schedule of NPDES Compliance

Cc: John Tindall, IDEQ
Eric Keck, PF City Administrator

CITY OF POST FALLS PROPOSED SCHEDULE OF NPDES COMPLIANCE

Description	2006	2007	2008	2009	2010	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
Particpation in Collaborative Process, TMDL & NPDES																				
Rathdrum Prairie Wastewater Master Planning																				
Reuse Suitablility Study Addendum																				
Design and Construction of Plant Upgrades & BNR																				
Optimization of BNR																				
Bioavailability Study Funding and Participation																				
Cycle 1 - NPDES Permit and TP WLA																				
Prepare Sampling QAPP (surface water & WRF)																				
Begin Quarterly Surface Water & WRF Monitoring																				
Complete Industrial Pretreatment Program																				
Update Master Plan to Facility Plan																				
Filtration Pilot Study for TP Reduction and Reuse																				
Study Design, Submittal and Approval																				
Funding through Rate/Fee Increase Hearing																				
Pilot Plant Design, Bid, Award, & Construction																				
Pilot Plant Performance Review for TP & CBOD																				
Submit Pilot Performance or Compliance Reports																				
Evaluate Bioavailability Against TMDL																				
Interim Chemical Addition & Solids Evaluation																				
Review Chemicals, Feed, Mixing & Settling																				
Funding through Rate/Fee Increase Hearing																				
Full-Scale Interim Chem Feed Design & Construct																				
Start-up & Operate Full Scale Chemical Feed																				
Evaluate Biosolids Impact on Process Units																				
Evaluate Bioavailability Against TMDL																				
Facility Plan Amendment and Financing Plan																				
Submit to DEQ & EPA for Review and Approval																				
Bond Funding - Judicial Validation or Election																				
Apply for Cycle 2 NPDES Permit																				
Tertiary Treatment Plant Design																				
Treatment Plant Design-TP, CBOD & Biosolids																				
Cycle 2 - NPDES Permit and TP WLA																				
Tertiary Treatment Plant Design and Construction																				
Complete Design, Review, Bid & Award																				
Construction																				
Filter Start-up, Testing and Compliance Period																				
Start-up and Testing																				
Optimize TP removal																				
Monitor & Modify Biosolids & Sidestreams																				
Evaluate Bioavailability Against TMDL																				
Submit Compliance/Full Scale Performance Rprts																				
Apply for Cycle 3 NPDES Permit																				
10 Year TMDL Update-Reallocate TP & CBOD WLA																				
Cycle 3 - NPDES Permit and WLA																				
Review and/or Update Facility Plan to Address Revised TMDL and Emerging Issues																				

Note: Due to phosphorus WLA well beyond growing season irrigation, reuse projects to meet WLA goals will likely be economically infeasible for the foreseeable future.